

# TWO NEW SPECIES OF TRICHOPTERA FROM THE MURCHISON MOUNTAINS, SOUTH ISLAND, NEW ZEALAND

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*Abstract.* Two unique males are described as new species in the genera *Psilochorema* and *Edpercivalia* (Family Rhyacophilidae).

As the Murchison Mountains are isolated on the west side of Lake Te Anau in the south-west of the South Island, it is considered worthwhile to record two new species even though each is represented only by a unique male specimen.

Family RHYACOPHILIDAE  
Genus *Psilochorema* McLachlan, 1866

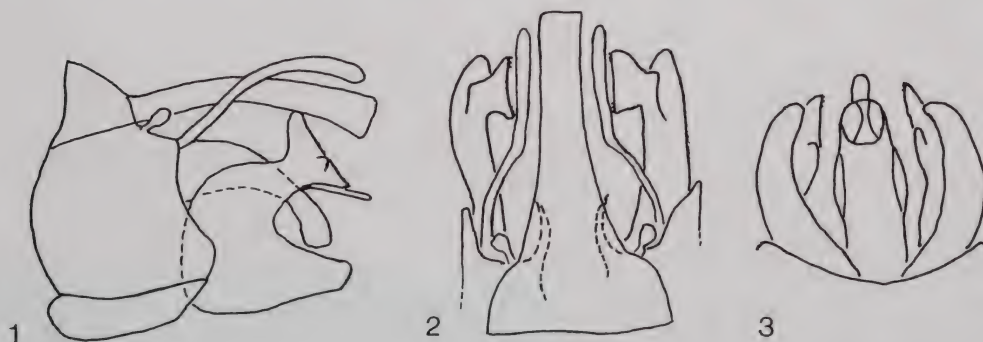
*Psilochorema embersoni* Wise, sp.n.

(Figs. 1-3)

Species typical of genus in wing pattern, wing venation and, in male, a pair of ventral elongate appendages on Abdomen VI and posterior median ventral process on Abdomen VII.

*Genitalia, ♂* (Figs. 1-3). Dorsal process (Segment X) membranous, elongate. Above superior appendages an internal curved spine together with an external rounded process on each side; superior appendages long, bent near middle. Inferior appendages short, stout, tapering to apex ventrally in lateral view, with apical inner teeth; dorsal arm wide, expanded apically; apical expansion bent inward with outer angle bearing a central tubercle; points of expansion sub-equal in length, bearing internal teeth. Aedeagus with mid-length lateral expansions and a dark apical dorsal flap.

*Measurements.* Length of forewing 11.5mm.



Figs. 1-3. *Psilochorema embersoni* Wise, sp.n. Male genitalia. 1. Lateral. 2. Dorsal. 3. Ventral.

*Specimen examined.* SOUTH I. Holotype ♂. Murchison Mts (FD), E. McKenzie Burn, 1110m, 8.XII.1980, R.M. Emberson, C.A. Muir. Lodged in Auckland Museum, Auckland.

The genitalia of this male specimen is closest to that of *Psilochorema nemorale* McFarlane, 1951, from the Southern Alps to the north. The inferior appendages appear in lateral view to be intermediate between those of that species and such species as *Ps. macroharpax* McFarlane, 1951, *Ps. bidens* McFarlane, 1951, and *Ps. donaldsoni* McFarlane, 1960. In the last three species the ventral portion of the inferior appendage is large and the dorsal arm is small or thin, in *Ps. embersoni* the ventral portion is smaller and the dorsal arm larger, while in *Ps. nemorale* the ventral portion is very reduced and the large dorsal arm is the major part of the appendage.

The species is named for Dr R.M. Emberson who collected some aquatic insects in the Murchison Mts and made them available to the author.

#### Genus **Edpercivalia** McFarlane, 1964

**Edpercivalia harrisoni** Wise, sp.n.

(Figs. 4-7)

Species typical of genus in wing pattern, wing venation and, in male, a mid-ventral posterior spine on Abdomen VII and ventral extensions of posterior margin on Abdomen VIII, IX.

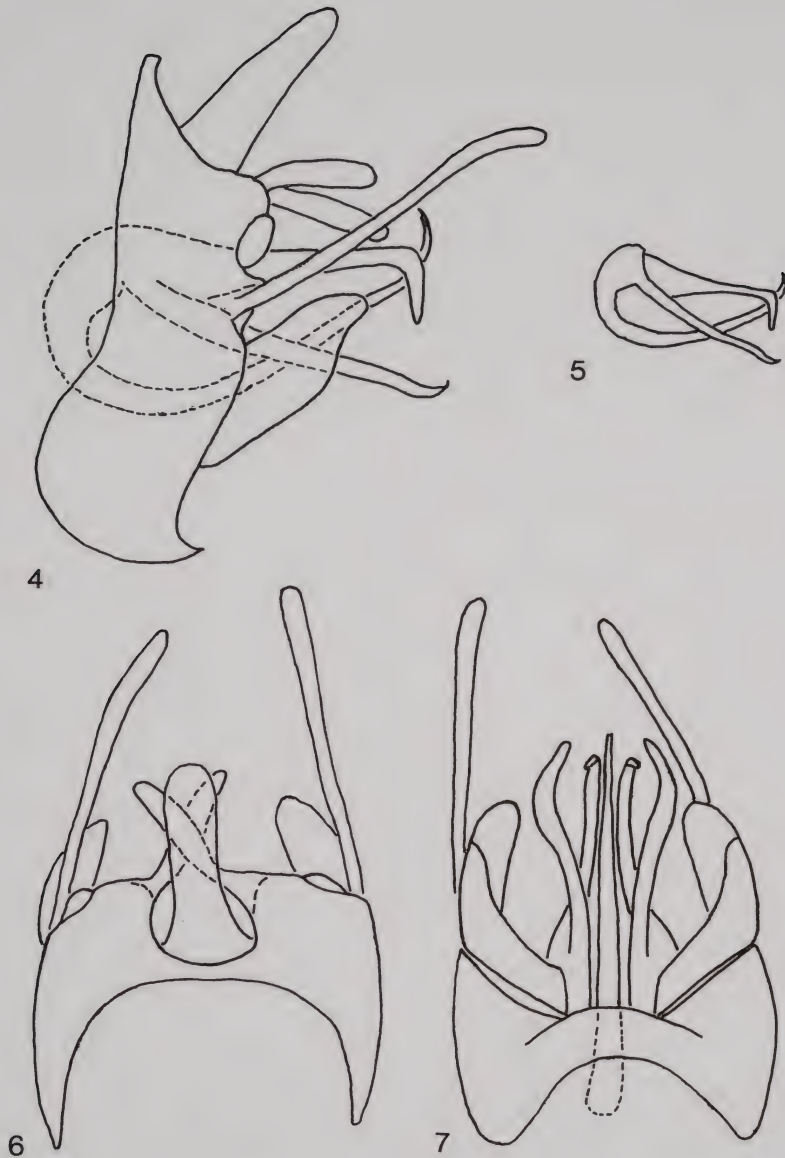
*Genitalia*, ♂ (Figs. 4-7). Dorsal process (Segment X) membranous. Segment IX reduced to a thin band dorsally; paraproctal processes large, conspicuous, with short setae dorsally, crossed-over in present specimen; below each process a lateral setose protuberance. Superior appendages elongate. Inferior appendages short, elongate in lateral view with apex rounded dorsally and concave below. Aedeagus (Fig.5) curved dorsally with paired appendages, the dorsal pair strongly down-curved before apices, the ventral pair slightly up-curved at tip, all dark-brown.

*Measurements.* Length of forewing 16mm.

*Specimen examined.* SOUTH I. Holotype ♂. Murchison Mts (FD), Plateau Ck, 990m, on rock at night, 2.XII.1980, R.M. Emberson, C.A. Muir. Lodged in Auckland Museum, Auckland.

Species of this genus can be separated by the appearance of the inferior appendage in lateral view. *Edpercivalia spaini* McFarlane, 1973 is perhaps the closest with a short, square inferior appendage, then *E. harrisoni* with a longer appendage, and other species such as *E. banksiensis* (McFarlane, 1939), *E. maxima* (McFarlane, 1939), *E. shandi* (McFarlane, 1951) and *E. thomasoni* (McFarlane, 1960) with the inferior appendage of various forms.

The species is named for Professor R.A. Harrison, previously head of the Entomology Department, Lincoln College, as a tribute to his entomological research and teaching.



Figs. 4-7. *Edpercivalia harrisoni* Wise, sp.n. Male genitalia. 4. Lateral. 5. Aedeagus. 6. Dorsal. 7. Ventral.

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